REMARKS/ARGUMENTS

Reconsideration and allowance of this application are respectfully requested. Currently, claims 57-116 are pending in this application.

Request to Approve Amendments to Drawings:

The Office Action Summary (PTOL-326) indicates that "The drawing(s) filed on 26 June 2003 is/are: accepted." However, Applicant notes that amendments to the drawings (Fig. 3) were filed on December 8, 2004. Applicant respectfully requests approval and entry of these amendments to the drawings.

Allowable Subject Matter:

Claims 63, 72, 78-83 and 116 have been indicated as being allowable.

The Office Action also indicates that claims 69, 71, 75-77, 99 and 100 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. This objection is not fully understood since claims 69, 71, 75, 76, 99 and 100 have already been rewritten in independent form including all of the limitations of their respective base claims in the Amendment/Response filed July 25, 2005. Claim 77 remains dependent from now allowable claim 76.

Rejections Under 35 U.S.C. §103:

Claims 57-62, 64, 66-68, 85-93, 98, 101-107, 109 and 113-115 were rejected under 35 U.S.C. §103 as allegedly being unpatentable over Oswald et al

(WO 98/00729, hereinafter "Oswald") in view of Wu et al (U.S. '380, hereinafter "Wu"). Applicant respectfully traverses this rejection.

In order to establish a prima facie case of obviousness, all of the claim limitations must be taught or suggested by the prior art and there must be some suggestion or motivation either in the references themselves or in the knowledge generally available to one of ordinary skill in the art to modify the reference or to combine reference teachings.

The combination of Oswald and Wu fails to teach or suggest all of the claim limitations. For example, the combination fails to teach or suggest "a detector, coupled to the receiver, for detecting the timing of the returned probe signals...and measuring the relative timing between the detected timings," and "the apparatus further comprises a gate input associated with each receiving element for passing signals from the receiving element to the detector, and a common timing signal generator for generating a common timing signal to activate the gate inputs to pass the signals to the detector," as required by independent claim 57 and its dependents. Independent claim 115 and its dependents requires similar limitations.

The above noted limitations are supported by, for example, page 32, lines 2-5 and page 34, lines 29-47 of the originally-filed specification. Claim 57 and 115 thus relate to a plurality of receiving elements wherein a gate input is associated with each receiving element for passing signals from the receiving element to a detector which measures the relative timing between the detected

timings of the received signals. A common timing signal is generated to activate the gate input to pass the signals to the detector. In this way (see, e.g., page 34, lines 43-47 of the originally-filed specification), very accurate timing of the triggering of the various gate inputs can be achieved. This enables arrangements in which positional information relating to the object can be determined with considerable accuracy. Again, the combination of Oswald and Wu fails to teach such an arrangement. In particular, there is no teaching or suggestion in this combination of gate inputs triggered by a common timing signal to pass signals to the detector, the detector measuring the relative timing between the detected timings of the signals.

Indeed, page 3 of the Office Action admits that "Oswald is silent about measuring the relative timing between the detected timings to determine angular position information." While Fig. 7 of Oswald discloses a single transmitter 100 and three receive antennas 102, 104 and 106, this embodiment of Oswald is concerned only with the time between transmission and receipt for each receive antenna considered separately, from which the range of the objects from each receiver can be obtained separately. Those separately obtained ranges can be combined in a triangulation process. The signal received at each receive antenna 102, 104 and 106 is therefore processed separately from a signal received at any other receive antenna.

Wu relates to a method of determining the location of a mobile phone, in particular to locating a phone used in relation to 911 emergency services. Signals

transmitted by the mobile phone are received at radio receivers at base stations. The differences in estimated signal propagation times between base stations is determined. (See col. 2, line 58 to col. 3, line 3). This is in marked contrast to the arrangement disclosed by Oswald. Oswald describes an apparatus for determining positional information relating to an object. In Oswald, a radar signal is transmitted towards the object and reflected signal is used to give positional information. There is no teaching in Wu of such probe signals. Wu thus relates to a completely different arrangement from that of Oswald, and thus one of ordinary skill in the art would not have been motivated to combine the teachings of Oswald and Wu.

Moreover, Wu describes a "system and method of estimating signal time arrival (emphasis added)" as noted in the title of Wu. Wu thus uses estimation methods to "estimate the mobile's location" (col. 2, line 62). Neither Wu nor Oswald appreciates the benefits of exemplary embodiments of the present invention which obtain accurate determination of information regarding the position of an object by a detector which detects return probe signals and measures the relative timing between the detected timings of the received signals. Again, even assuming *arguendo* that one of ordinary skill in the art were motivated to combine the teachings of Wu and Oswald, the combination would not have taught or suggested gate inputs triggered by a common timing signal to pass signals to the detector, the detector measuring the relative timing between the detected timings of the signals.

Accordingly, Applicant respectfully requests that the rejection under 35 U.S.C. §103 in view of Oswald and Wu be withdrawn.

Claims 65, 70 and 73-74 were rejected under 35 U.S.C. §103 as allegedly being unpatentable over Oswald and Wu in further view of Hane et al (WO '716, hereinafter "Hane"). Claims 94-96 were rejected under 35 U.S.C. §103 as allegedly being unpatentable over Oswald and Wu in further view of Kerry et al (WO '058, hereinafter "Kerry"). Claims 110-112 were rejected under 35 U.S.C. §103 as allegedly being unpatentable over Oswald and Wu in further view of Chen et al (U.S. '915, hereinafter "Chen"). Applicant respectfully traverses these rejections. None of these tertiary references (Hane, Kerry or Chen) remedies the above described deficiencies of the Oswald/Wu combination. Accordingly, Applicant respectfully requests that the above rejections under 35 U.S.C. §103 be withdrawn.

Conclusion:

Applicant believes that this entire application is in condition for allowance and respectfully requests a notice to this effect. If the Examiner has any questions or believes that an interview would further prosecution of this application, the Examiner is invited to telephone the undersigned.

Respectfully submitted,

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